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(54) Title: NOVEL BACILLUS BAGCEL CELLULOSE

## ORF Nucleotide sequence of cellulase gene

ATGGGTTATA	CCAAAGCGAA	GTGTACGTTG	AAAAAACTG	TCTTGGTTGG	50
TTTAATTCTC	TGTTAAGTG	TGTCAATGTT	TGTTCCAAATG	ACATCAGCTG	100
AAGATGTCAC	TTGCTCACAG	TTGGATATTC	ACTCCTATGT	AGCTGACATG	150
CAGCTGGCT	GGAATTTAGG	AAATACGTTT	GACGCTGTTG	GAGATGATGA	200
AACAGCGTGG	GGGAATCCTC	GTGTAACAAG	AGAGTTAATA	AAAACGATTG	250
CTGATGAAGG	GTATAAAAGC	ATTCGTATCC	CAGTGACATG	GCAAAATCAA	300
ATGGGTGGTT	CTCCAGATTA	TACGATAAAT	GAAGATTATA	TCAATCGGGT	350
GGAGCAAGCG	ATAGATTGGG	CGTTGGAGGA	AGACTTATAT	GTGATGTTAA	400
ATGTGCATCA	TGACTCATGG	CTGTGGATGT	ATGATATGGA	ACATACTAT	450
GATGAGGTCA	TGGCAAGATA	TACAGCTATT	TGGGAACAAT	TGTGGGAAAA	500
ATTCAAAAGC	CACCTCCATA	AGTTGATGTT	TGAGAGTGTC	AATGAGCCTA	550
GGTTTACGCA	GGAGTGGGGA	GAGATTCAAG	AAAATCATCA	TGCTTACTTA	600
GAAGATTFAA	ATAAGACGTT	CTATTATATT	GTCAAGAGAT	CAGGAGGCAA	650
TAATGTGGAG	CGCCCTTTAG	TATTGCCTAC	GATAGAAACA	GCCACGCTC	700
AGGATTTACT	AGATCGCTTG	TATCAAACAA	TGGAAAGACT	GGATGATCCT	750
TATTTAATTG	CCACGGTGCA	TTATTATGGC	TTCTGGCCAT	TTAGTGTCAA	800
TATAGCAGGG	TACACTCAT	TTGAACAGGA	AACACAACAA	GATATTATAG	850
ACACCTTTGA	CGTGTTTCAT	AACACATTTA	CAGCGCGTGG	TGTCCTCAGTT	900
GTATTAGCG	AATTGGGTTT	GTTAGGCTTT	GACAAAAGTA	CGGATGTGAT	950
TCAGCAAGGG	GAGAAATTAA	AGTTTITTTGA	GTTTCTCATC	CATCATCTCA	1000
ATGAAGCTGA	TATAACCCAT	ATGTTATGGG	ATAACGGCCA	GCATTTAAAT	1050
CGAGAAACTT	ATGCATGGTA	TGATCAAGAA	TTTCATGACA	TATTAAGAGC	1100
GAGTTGGGAG	GGGCGTTCTG	CTACAGCAGA	GTCTAATTTG	ATTCTATGTA	1150
AGGACGGAAA	GCCAATTAGA	GATCAAGATA	TACAGCTTTA	CTTAAACGGA	1200
AATGAGCTAA	CAGCCTTACA	GGCAGGGGAG	GAAATGCTTG	TTCTAGGAGA	1250
GGATTATGAA	CTAGCAGGAG	GGGTATTAA	GCTAAAAGCG	GACACCTCA	1300
CAAGACTAAT	TACCCCTGGT	CAATTAGGAA	CCAATGCAGT	CATCACAGCA	1350
CAATTAAATT	CTGGAGCAGA	CTGGCGTTT	CAATTACAGA	ATGTGGACGT	1400
GCCAACGGTC	GAAAATACAG	ATGGCTCAAC	ATGGCAITTT	GCGATCCCTA	1450
CCCATTTTAA	TGTTGATAGT	CTTGGGACGA	TGGAAGCTGT	TTATGCAAAC	1500
GGAGAAATATG	CTGGGCGGCA	AGATTGGACG	TCAATTTAAAG	AATTTGGCGA	1550
GGCGTTTCT	CCTAATTACG	CCACAGGGGA	AATTTATTATA	TCAGAAGCGT	1600
TCTTTAAOCG	GGTACGGGAT	GATGATATCC	ATTTAACATT	TCAITTTTGG	1650
AGCGGAGAGA	CGGTGGAATA	TACCTTACGT	AAAAATGGCA	ATTATGTTCA	1700
AGGTAGACGG	TAA				1713

(57) Abstract: The present invention provides a novel cellulase nucleic acid sequence, designated BagCel, and the corresponding BagCel amino acid sequence. The invention also provides expression vectors and host cells comprising a nucleic acid sequence encoding BagCel, recombinant BagCel proteins and methods for producing the same.

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